Herbarium (DS). The plants which Engelmann named *Juncus aseptus* are incompletely septate, but this condition is frequent over the entire range of *J. nevadensis*. Jepson's *diagnosticum:* "marked by its very narrow and erect strongly septate leaves with prominent ligules" for *Juncus nevadensis* is only partly true. The leaves are seldom "strongly septate" and not always "very narrow", though in general they are much more grass-like than those of *J. Mertensianus*. Both species have "prominent ligules". From the fact that Engelmann did not publish *J. aseptus* we may infer he concluded that the plant was indistinguishable from *J. nevadensis*, as Parish and Jepson subsequently decided.

Collections from the herbaria of Stanford University (DS), University of California, Berkeley (UC), California Academy of Sciences (CAS), Los Angeles Museum (LAM) and the University of Colorado (COLO) have been studied and selected collections are cited herein. Where the location of the collection may not be deduced from the collector's name, the herbarium of deposit is noted. To the personnel of these institutions who have made available this material I am indeed grateful.

Botanist with the Foreign Economic Administration

BOTANICAL SPECIALTIES OF THE SEWARD FOREST AND ADJACENT AREAS OF SOUTH-EASTERN VIRGINIA

M. L. Fernald

(*Continued from page 182*)

Cephalanthus occidentalis L., var. pubescens Raf. To the previously cited stations, on the Coastal Plain, add an extensive one in the outer Piedmont. Greensville Co.: border of Mitchell's Millpond, west of Brink, no. 14,665; the dull or lustreless foliage, downy beneath, strongly contrasting with the bright green foliage of typical glabrous *C. occidentalis*.

Elephantopus carolinianus Willd., forma vestitus Fernald in Rhodora, xliv. 458 (1942). To the single known station (in Nansemond Co.) add one in Brunswick Co.: woods along Meherrin River at Westward Bridge (or Mill), no. 14,742. See p. 100.

Eupatorium hyssopifolium L. (typical). See Rhodora, xliv. 459, pl. 737, fig. 1 (1942). Local range extended inland from the

Coastal Plain to BRUNSWICK Co.: springy sphagnous and argillaceous bog, Ram-hole Swamp, Seward Forest, near Triplett, no. 14,744. See p. 103.

E. **cordigerum** (Fernald), stat. nov. (PLATE 908). *E. rotundifolium* L. var. *cordigerum* Fernald in RHODORA, xlv. 477 (1943).

At the time I published *E. rotundifolium*, var. *cordigerum* I was following the interpretation of Fernald & Griscom in RHODORA, xxxvii. 180 and 181 (1935), in which all members of the *rotundifolium* series were merged as one variable species. In that paper, however, certain seemingly constant and morphologically significant characters were overlooked and too much weight was placed on the variable ones, like the occurrence of occasional alternate branching as opposed to predominantly opposite branching. No note was made of the very striking fact that in *E. rotundifolium* the principal cauline leaves (PLATE 909, FIGS. 1–3) have their bases straight, entire and subtruncate to broadly cuneate, with the toothing starting above this entire base; furthermore, it was not noted that in *E. rotundifolium* (PLATE 909, FIGS. 2 and 3) the ascending and prolonged prominent lateral veins arise from the base of the midrib. In the other three species, *E. verbenaefolium* Michx. (1803) = *E. lanceolatum* Muhl. ex Willd. (1804), our PLATE 910, *E. pubescens* Muhl. ex Willd. (1804), our PLATE 911, and *E. cordigerum*, PLATE 908, the principal leaves are toothed to the base and the elongating lateral veins tend to be united at base to the midrib, coming off from it well above its base. The uppermost leaves of *E. verbenaefolium* are greatly reduced, becoming narrowly lanceolate to linear and entire, while in the other three species they are more ovate and toothed. The involucre of *E. verbenaefolium* (PLATE 910, FIG. 4) is about 1 mm. shorter than in the others, the inner phyllaries rather abruptly tipped. Northeast of the upland region of Virginia and Kentucky *E. verbenaefolium* is primarily a coastwise plant, of acid peats and sands northeastward to southern New England. Reexamination of a photograph of Michaux's type (our PLATE 910, FIG. 1) indicates that an error was made when, in 1935, it was stated as identifiable with *E. pubescens* (PLATE 911). In regard to earlier names of Walter which, perhaps, might be applicable to *E. verbenaefolium*, it is unsafe to take them up until his plants can be actually studied. Walter's diagnoses were very brief, he did not realize the com-

plexity of the genus in the Southeast, and his names could well belong to plants quite different from *E. verbenaefolium.*

E. pubescens, E. cordigerum and *E. rotundifolium* have the inner phyllaries attenuate to acute or slender tips. In *E. pubescens* the leaves are oblong to ovate, gradually rounded to base, the plant more general in the Piedmont area than *E. verbenaefolium,* occurring in moist or dry woods, thickets, etc., from Florida to Louisiana, northward to southern Maine, Massachusetts, southeastern New York, New Jersey, Pennsylvania, western Virginia and West Virginia.

E. rotundifolium, with characteristic straight and untoothed leaf-base, broadly deltoid-ovate to suborbicular rugose-veiny blades, with the prolonged ascending lower veins springing from the base of the midrib, characterizes siliceous, argillaceous or peaty soils from Florida to Texas, north only to Long Island, New Jersey, Maryland, Tennessee and Arkansas; while *E. cordigerum* is characteristic of river-marshes, swales and bogs of the Coastal Plain of southeastern Virginia and eastern North Carolina. Its strongly cordate-clasping leaves are unique in the group and their prolonged lateral veins are united to the midrib much higher than in the others, the type showing compound bases of the midrib up to 1.5 cm. long. In *E. rotundifolium* the inner phyllaries taper to slender pointed tips, in *E. pubescens* they are merely acuminate, but in *E. cordigerum* they are prolonged into long arching, linear, scarious appendages.

After several days of checking and rechecking the characters I feel that *E. verbenaefolium, pubescens, cordigerum* and *rotundifolium,* although some of them may hybridize, are quite as clear species as *E. rugosum* (*E. urticaefolium*) and *E. aromaticum,* or as *E. dubium* (*verticillatum*), *E. maculatum* and *E. fistulosum* of the *purpureum* series.

PLATE 908, EUPATORIUM CORDIGERUM Fernald: FIG. 1, portion of TYPE, ×1; FIG. 2, base of leaf, to show fusing of lateral nerves and midrib, × 1½, from TYPE; FIG. 3, involucre, × 10, from *Fernald,* no. 14,502.

PLATE 909, E. ROTUNDIFOLIUM L.: FIG. 1, TYPE (two stems), × ⅕, photo. by *B. L. Robinson;* FIG. 2, characteristic leaves, to show subtruncate and entire base and basal lower lateral veins, × 1, from south of Grassfield, Norfolk Co., Virginia, *Fernald & Long,* no. 4219; FIG. 3, base of leaf, to show venation, × 2, from no. 4219; FIG. 4, involucre, × 10, from no. 4219.

PLATE 910, E. VERBENAEFOLIUM Michx.: FIG. 1, TYPE, × ¼, photo. by *B. L. Robinson;* FIG. 2, characteristic foliage, × 1, from Winterham, Amelia Co., Virginia, *Fernald & Long,* no. 9168; FIG. 3, base of leaf, to show venation, × 2, from no. 9168; FIG. 4, involucre, × 10, from no. 9168.

PLATE 911, E. PUBESCENS Muhl.: FIG. 1, TYPE, × ¼, photo. by *B. L. Robinson;* FIG. 2, median leaves, × 1, from Auburn, New Jersey, *Long*, no. 18,060; FIG. 3, base of leaf, to show fusion of lower lateral veins and midrib, × 2, from no. 18,060; FIG. 4, involucre, × 10, from no. 18,060.

*E. AROMATICUM L., var. LACERUM Gray.—PRINCESS ANNE COUNTY: rich woods, Virginia Beach, no. 5075 (distrib. as a hybrid). SUSSEX COUNTY: rich woods and bushy clearing north of Double Bridge, about 6 miles northwest of Jarratt, no. 11,452.

Typical thick-leaved *Eupatorium aromaticum* has the dark green leaves ovate, rounded to subtruncate at base, blunt and with blunt teeth. Var. *lacerum*, described from Florida, has the thinner, pale green, rhombic- or triangular-ovate, acuminate blades cuneate at base and sharply, sometimes lacerately, toothed, and on slender petioles. Transitions occur but the variety seems to be southern.

*E. SESSILIFOLIUM L., var. BRITTONIANUM Porter. GILES COUNTY: woods on dry shaly hillslope along New River, 1.5 miles south-southwest of Goodwin's Ferry, *Fogg*, no. 14,991.

Typical *Eupatorium sessilifolium* has relatively thin, lanceolate leaves, usually with rather prominent toothing. It is apparently frequent in calcareous areas in Virginia, where both vars. *Brittonianum* and *Vaseyi* (Porter) Fernald & Griscom are found. The species consists of three somewhat pronounced varieties, though, like all true varieties, their characters merge. As stated, the leaves of true *E. sessilifolium* are relatively thin, lanceolate and commonly with prominent teeth. It is rare and mostly uncharacteristic in New England and most of New York, where var. *Brittonianum* is the usual variety, this plant having firmer to subcoriaceous ovate-lanceolate to ovate leaves, with the teeth relatively fine. Like typical *E. sessilifolium* its leaves are slenderly acuminate and the larger ones range from 0.8–1.8 dm. long. Measurements of the thin- and lanceolate-leaved series (25 nos.) gives a range in size of the largest leaves of 0.9–1.8 dm. long by 2–4 cm. wide, with an average of 14 cm. long and 2.5 cm. wide, five to six times as long as broad. Var. *Brittonianum* (45 sheets), an isotype of which is before me, gives a range of 0.8–1.8 cm. long by 3–6 cm. wide, with an average of 12.9 cm. long by 4.4 cm. wide, about three times as long as wide. That these proportions are significant is apparent from the rarity of typical *E. sessilifolium* or its absence in New England, interior New York, Wisconsin, Illinois and Missouri, and the tendency of

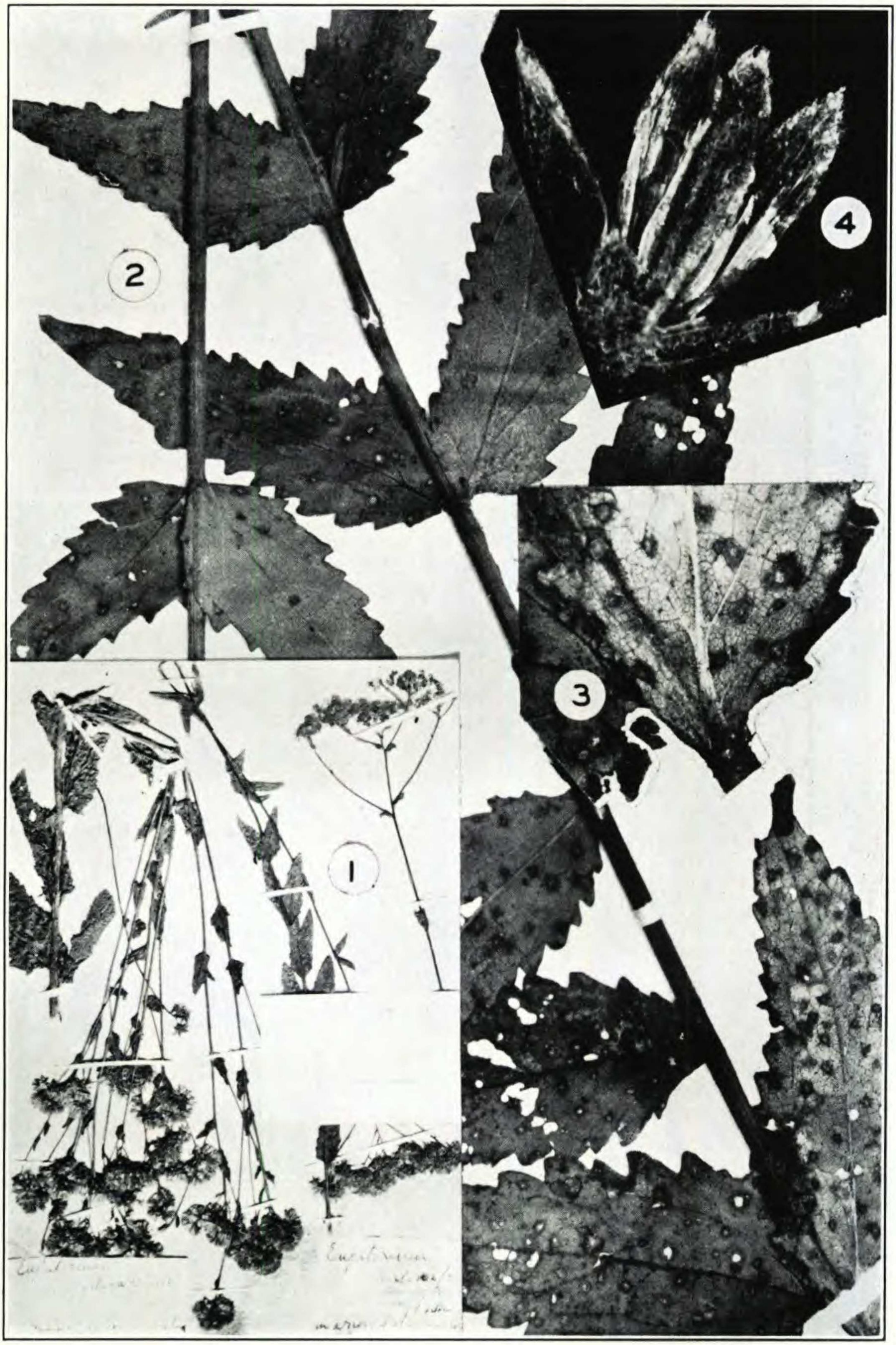

Photo. B. G. Schubert.

EUPATORIUM VERBENAEFOLIUM: FIG. 1, TYPE, × ¼, after *B. L. Robinson;* FIG. 2, foliage, × 1; FIG. 3, lower veins of lower leaf-surface, × 2; FIG. 4, involucre, × 10

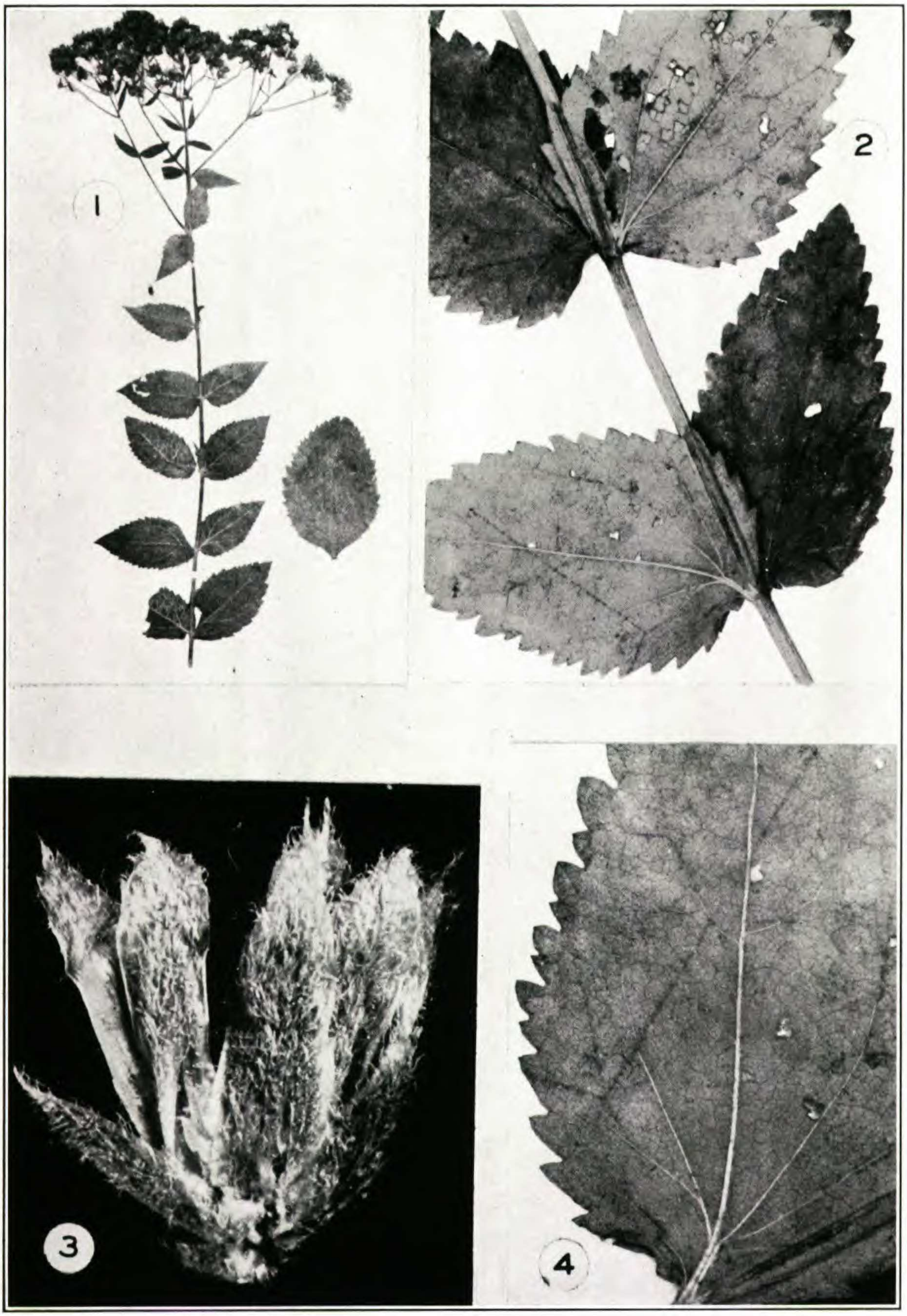

Photo. B. G. Schubert

EUPATORIUM PUBESCENS: FIG. 1, TYPE, × ¼, after *B. L. Robinson;* FIG. 2, median leaves, × 1; FIG. 3, involucre, × 10; FIG. 4, venation of lower leaf-surface, × 2

var. *Brittonianum* to follow the higher mountains to western North Carolina and eastern Kentucky.

Var. *Vaseyi* has the upper half of the stem puberulent or minutely pilose, sometimes glutinous, the duller green leaves oblong-ovate, merely acute or short-acuminate, the larger ones 4–12 cm. long by 2.3–6 cm. broad (about twice as long as broad) and scabrous beneath with minute puberulence. The type (U. S. Nat. Herb.) is quite characteristic of the narrower-leaved plants of this variety. It occurs in less calcareous habitats than the others, from southeastern Pennsylvania and eastern Maryland to West Virginia, south to eastern Virginia, North Carolina and eastern Tennessee.[1]

SOLIDAGO RUGOSA (Ait.), var. CELTIDIFOLIA (Small) Fernald. Local range extended inland from Coastal Plain to BRUNSWICK Co.: springy sphagnous and argillaceous bog, Ram-hole Swamp, Seward Forest, near Triplett, no. 14,751. See p. 103.

*HAPLOPAPPUS DIVARICATUS (Nutt.) Gray. (*Isopappus divaricatus* (Nutt.) T. & G.). Range extended northward into BRUNSWICK Co.: fallow field, south of Seward Forest Headquarters, Triplett, Nov., 1944, *Lewis*.

A characteristic erect and late-flowering southern annual of dry open woods, clearings and fields, often weedy. In his Genus Haplopappus, 212, 213 (1928), Hall gave its range, from Florida to Texas, northward to South Carolina and Arkansas, and its height as "2 to 7 dm." It has been found, however, in North Carolina: old field, McCuller's, Wake Co., Oct. 12, 1937, *Godfrey;*

[1] The following *Eupatoria*, although not from Virginia, may be noted here.

E. RESINOSUM Torr., var. **kentuckiense,** var. nov., *E. resinoso* habitu simillima; caulis internodiis supernis corymbi ramibusque pilosis, pilis elongatis curvatis.—Nelson County, KENTUCKY: marshy area, Bean's Lake, September 8, 1932, *Sister Rose Agnes* (TYPE in Herb. Gray).

Closely matching the endemic *Eupatorium resinosum* of pine-barren bogs of New Jersey and Delaware in habit, foliage, involucres, etc., but differing in the longer pubescence, typical *E. resinosum* being minutely puberulent. Sister Rose Agnes correctly identified the plant as *E. resinosum* but the late Dr. Robinson, evidently without a close study of the plant, relabeled it *E. perfoliatum*, var. *cuneatum* Engelm. The involucre and the narrow leaves without the broadly cuneate, entire base of *E. perfoliatum*, var. *cuneatum* are identical with those of the New Jersey plant.

E. DUBIUM Willd., forma **elutum,** f. nov., foliis ovatis triplinerviis subtus viscido-granulatis scabris; involucris floribusque albidis.—TYPE: low ground near Long Island Sound, Saybrook Junction, Connecticut, September 14, 1914 (colony of about 100 plants), *R. W. Woodward* in Herb. Gray.

E. MACULATUM L., forma **Faxoni,** f. nov., foliis anguste ovatis utrinque attenuatis irregulariter grosse serratis subtus scabris; corymbo supra complanato; phyllariis floribusque albidis.—TYPE: Gate of Crawford Notch, New Hampshire, September 2, 1884, *Charles E. Faxon* in Herb. Gray.

disturbed soil on sandhill, south of Aberdeen, Scotland Co., *Godfrey*, no. 6938; one of the Godfrey specimens 1 m., the other 1.4 m. high. Mr. Lewis states that his plant was 6 ft. (1.8 m.) high. Small individuals from Georgia are only 1.5 dm. high. The species, like most annuals of disturbed soils, will evidently respond to the amount of nutrition.

BOLTONIA CAROLINIANA (Walt.) Fernald in RHODORA, xlii. 487, pl. 642 (1940). Range extended inland to western BRUNSWICK Co.: bottomland woods along Poplar Creek, southwest of Ebony, no. 14,668. See p. 97.

Boltonia caroliniana, known only from eastern South Carolina and southeastern Virginia, is here found along Roanoke drainage. It is presumably along the lower Roanoke River and its tributaries in North Carolina.

*POLYMNIA UVEDALIA L., var. DENSIPILA Blake in RHODORA, xix. 48 (1917). BRUNSWICK Co.: rich low woods (bordering swamp of Quarrel's Creek), "Chamblis bigwoods", Seward Forest, near Triplett, no. 14,754. See p. 101.

Differing from typical *Polymnia Uvedalia*[1] and its var. *floridana* Blake in the very dense and essentially glandless pilosity of the branches of the inflorescence. Originally described from Louisiana, Oklahoma and Texas; also from Bermuda. More recently extended northward in the Mississippi Basin to Missouri. Its seeming isolation in southeastern Virginia reminiscent of several other plants.

HELIANTHUS ANGUSTIFOLIUS L. Noted (but not collected) at several places in BRUNSWICK Co. See p. 103.

ECLIPTA PROSTRATA (L.) L. *E. alba* (L.) Hassk.—Common in the southeastern counties.

Here entered in order to call attention to the correct name, as taken up by Exell in his Cat. Vasc. Pl. S. Tomé, 225 (1944). The earliest names (omitting later ones for this cosmopolitan species) as enumerated by Exell are

Verbesina alba L. Sp. Pl. ii. 902 (1753); *V. prostrata* L., l. c. (1753). *Eclipta prostrata* (L.) L. Mant. Pl. Alt. 286 (1771). *E. erecta* L. l. c. (1771), *nomen illegitimum*. *E. alba* (L.) Hassk. Pl. Jav. Rarior. 528 (1848).

[1] I am often asked about the specific name *Uvedalia*. The species was named for the Rev. Dr. ROBERT UVEDALE (1642–1722), an English botanist, mentioned by Plukenet and a correspondent of Magnol, Sloane, Sherard and other leading botanists of his time. The genus *Uvedalia* was dedicated to him by Robert Brown.

Since *Verbesina alba* L. and *V. prostrata* L. are considered conspecific and are of even date, the first of them taken up must stand. This is *E. prostrata* (L.) L. (1771).

CIRSIUM VIRGINIANUM (L.) Michx. Range extended inland to BRUNSWICK Co.: springy sphagnous and argillaceous bog, Ramhole Swamp, Seward Forest, near Triplett, no. 14,757. Also noted in dry pine woods near by. See p. 103.

C. VIRGINIANUM, forma REVOLUTUM (Small) Fernald in RHODORA, xlv. 509 (1943). BRUNSWICK Co.: with the last, no. 14,758. See p. 103.

SOME INCONVENIENT UPHEAVALS OF FAMILIAR NAMES AND AUTHOR-CITATIONS.—Tiring of trying to find even recognizable formal, not to say varietal, differences in some recently proposed "subspecies", I turned, for a let-up in the tension, to the problem of exact dates of issue of certain publications which I had found cited. These involved three works of nearly competing dates: Sprengel, Florae Halensis Tentamen Novum, with the date on the title-page 1806; Sprengel, Mantissa Prima Florae Halensis, with the title-page dated 1807; and Persoon, Synopsis, pars ii. dated 1807. Fortunately the date of publication of pp. 1–272 of vol. ii. of Persoon was established by Blake in RHODORA, xvii. 134, footnote (1915), he correctly stating that:

> Although the second volume of Persoon's Synopsis is dated 1807, its first section (pp. 1–272) was issued in the autumn of 1806, as is shown by a review in the Regensb. Bot. Zeit. v. 321 (21 Nov. 1806).

That pushes a large part of Persoon's 2nd volume into competition with other publications of 1806. The resulting changes have not been checked.

My special purpose in the present notes is to draw attention to two other works, one of which seems to have been overlooked by the editors of *Index Kewensis* and by others who have followed that work in assigning many specific names to the wrong author. On May 30, 1807, Johann Friedrich Theodor Biehler issued his doctor's dissertation, printed in Halle. It was entitled PLANTARUM NOVARUM EX HERBARIO SPRENGELII CENTURIAM . . . and it was reviewed in the Regensburg Botanische Zeitung for 15 October, 1807; in other words it was definitely published in late spring or summer of 1807. Biehler having done a piece of descriptive work considered by Sprengel sufficient for his thesis,

Sprengel promptly absorbed it and as the second part of his own Mantissa Prima (pp. 27–58) put it out under his own name as *Novarum Plantarum ex Herbario meo Centuria.* The latter work, containing Biehler's unacknowledged descriptions and differently paged, did not come out in time to be reviewed in the Botanische Zeitung for 1807. Biehler's original publication was clearly the earlier of the two; yet all of the 100 species described are regularly cited from the second publication and Sprengel is as regularly and unjustifiably cited as the author. Some of the proposed species were described from garden plants, others from India, New Caledonia, New Zealand, St. Helena, The Caucasus, Cuban, Mongolia, etc., while a few were from North America, chiefly received from Muhlenberg. Since these, as well as the Old World species, have been regularly cited as of Sprengel, I am here noting such in our own flora as require the replacement of that author's name by Biehler's.

SCIRPUS LUPULINUS Biehler, Plant. Nov. Herb. Spreng. Cent. 4 (1807); Spreng. Mant. Prima Fl. Hal. 30 (1807). Generally identified with *Cyperus filiculmis* Vahl (1806).

PANICUM PENSYLVANICUM Biehler, l. c. 6 (1807); Spreng. l. c. 31 (1807). Not identified; type needs examination.

P. DISCOLOR Biehler, l. c. (1807); Spreng. l. c. (1807). Type needs critical examination.

POLYPOGON SETOSUS Biehler, l. c. 7 (1807); Spreng. l. c. (1807). Basis of MUHLENBERGIA SETOSA (Biehler) Trin. ex Jackson, Ind. Kew. iii. 209 (1894); Fernald in RHODORA, xlv. 237, plates 755 and 756 (1943).

AGROSTIS CLANDESTINA Biehler, l. c. 8 (1807); Spreng. l. c. 32 (1807). Basis of SPOROBOLUS CLANDESTINUS (Biehler) Hitchc. in Contrib. U. S. Nat. Herb. xii. 150 (1908).

AIRA NITIDA Biehler, l. c. 8 (1807); Spreng. l. c. 32 (1807). Basis of SPHENOPHOLIS NITIDA (Biehler) Scribn. in RHODORA, viii. 144 (1906).

A. PALLENS Biehler, l. c. (1807); Spreng. l. c. (1807). Basis of SPHENOPHOLIS PALLENS (Biehler) Scribn. l. c. 145 (1906).

POA CAROLINIANA Biehler, l. c. 10 (1807); Spreng. l. c. 33 (1807). Basis of ERAGROSTIS CAROLINIANA (Biehler) Scribn. in Mem. Torr. Bot. Cl. v. 49 (1894).

Although Hitchcock reduces *Poa caroliniana* to the synonymy of *Eragrostis pectinacea* (Michx.) Nees, emend., and illustrates the "linear" spikelets as 10–15-flowered, the original description of *P. caroliniana* called for "spiculis lanceolatis . . . quinque-

floris". The "ligula abbreviata obtusa" of *P. caroliniana* does not well describe the long tuft of hairs at the orifice of the sheath in *E. pectinacea*. The type needs critical examination.

FESTUCA NUTANS Biehler, l. c. 10 (1807); Spreng. l. c. 34 (1807), not Moench (1794) and F. OBTUSA Biehler, l. c. 11 (1807); Spreng. l. c. (1807).

Since *Festuca nutans* of Sprengel (*i. e.* Biehler) has generally been referred to *F. obtusa*, it is noteworthy that both Biehler and Sprengel (neither of whom were "splitters") described them both "*E. Pensylvania. Mühlenberg*". Their *F. nutans* was strict, 3 feet high, with lanceolate leaves, the panicle erect but nodding at summit; the ovate-oblong, obtuse spikelets 5-flowered, the oblong glumes muticous; the grain oblong. *F. obtusa* had decumbent, geniculate and weak culms and glaucous, linear leaves; the panicle "aequali" (evidently equaling the culm), flaccid, with few spikelets, these pedicellate, oblong and 3-flowered, the unequal glumes much smaller than the lemmas. In other words, *F. obtusa* was the familiar, weak and usually sprawling plant with usually 3-flowered spikelets and soon diffuse panicle which correctly passes under that name (incorrectly as of Sprengel instead of Biehler); while for *F. nutans* Biehler gave a good description of *F. paradoxa* Desv. Opusc. 105 (1831) or *F. Shortii* Kunth ex Wood, Class-bk. 794 (1861), a species long known to grow in Muhlenberg's area, about Lancaster. The earlier *F. nutans* Moench (1794) invalidates *F. nutans* Biehler.

EPILOBIUM COLORATUM Biehler. l. c. 18 (1807); Spreng. l. c. 39 (1807); Muhl. ex Willd. Enum. Hort. Berol. 411 (1809).

Although *Index Kewensis* caught the Sprengel citation of 1807, it entered it as somehow secondary to that of Muhlenberg ex Willdenow (1809) and quite overlooked the earlier publication of Biehler, based on material sent by Muhlenberg to Sprengel. Biehler's detailed description in 12 lines is much more decisive than the 2-line diagnosis of Muhlenberg ex Willdenow. The easy-going faith in "authority" is illustrated by the regular taking up of *E. coloratum* as of Muhl. ex Willd. (1809), with the 1807 publication of the species by Sprengel (who absorbed it from the still earlier Biehler) as a secondary citation only. There seems to be no escape from writing E. COLORATUM Biehler.

SCUTELLARIA INCANA Biehler, l. c. 25 (1807); Spreng. l. c. 44 (1807).

Sprengel as the author must give way to Biehler. The plant was received from Muhlenberg as his *S. pubescens* Muhl. in Trans. Am. Phil. Soc. iii. 173 (1793), *nomen nudum*, but, published as a synonym of *S. incana*, it should have the following additional references: *S. pubescens* Muhl. ex Biehler, l. c. (1807) as synonym; Spreng. l. c. (1807) as synonym.

S. ELLIPTICA Muhl. ex Biehler. l. c. 26 (1807); Spreng. l. c. 44 (1807); but originally and legitimately published by Muhl. in Trans. Am. Phil. Soc. iii. 173 (1793).

S. elliptica Muhl. (1793) must take the place of *S. ovalifolia* Pers. Syn. ii. 136 (1806), the *S. pilosa* Michx. (1803), not Hill (1768). In his *American Species of Scutellaria*, Univ. Calif. Pub. Bot. xx. no. 1: 86 (1942), Epling cited *S. ovalifolia* as of Persoon (1807) but, as noted on p. 197, the first section of Pers. Syn. ii. came out in 1806. Under his needless *S. ovalifolia*, subsp. *mollis* Epling, l. c. (based on the same type as *S. ovalifolia*) he cites the valid publication of *S. elliptica* as starting with Sprengel, l. c., "probably based upon a specimen sent by Muhlenberg". Sprengel, literally copying from Biehler, left no "probably" in the matter since he definitely gave Muhlenberg as the author: "Sc. elliptica Mühlenb. *in lit.*", the plant "E. Pensylvania".

In the same treatment Epling cites as a synonym *S. elliptica* Muhl. in Trans. Am. Phil. Soc. iii. 173 (1793), "nomen nudum". Now, although most of the new names published by Muhlenberg in his *Index Florae Lancastriensis*, Trans. Am. Phil. Soc. iii. 157–184 (1793) and in his *Supplementum Indicis Florae Lancastriensis*, l. c. iv. 235–242 (1799) were merely *nomina nuda*, in a very few cases Muhlenberg based his species on plants collected by Clayton and described by Gronovius in his Flora Virginica, ed. 2 (1762) or described by Marshall or others. If the species of Linnaeus (or his contemporaries), based wholly on earlier polynomials of himself or others are valid, then, surely, Muhlenberg's binomials, given to clearly cited and earlier described plants of others are equally valid. In the case of *Scutellaria elliptica* Muhl. in Trans. Am. Phil. Soc. iii. 173 (1793) Muhlenberg was definite:

> **Scutellaria elliptica**, Claytoni. 92. N. S.

That, expanded, is *S. elliptica* of Clayton (or Gronovius), Fl. Virg. ed. 2: 92 (1762). Turning to Gronovius (or Clayton) we

find on p. 92 only one species of *Scutellaria*, described in perfectly clear terms:

> SCUTELLARIA *foliis ovatis, utrinque acutis, obtuse serratis.*
> Scutellaria virginiana foliis dentatis. *Moris. hist.* III. *p.* 416. *t.* 19. *f.* 3.
> Cassida foliis Betonicae, flore ex albo & violaceo variegato. *Clayt. n.* 758.
> OBS. *Bracteae seu folia floralia parva, ovata integerrima, corollis dimidio breviora.*

That is a perfectly good account of the common plant of eastern Virginia which has passed as *Scutellaria pilosa* Michx. and which has recently passed as *S. ovalifolia* Pers. Aside from the Clayton material, no. 758, Morison's *Scutellaria virginiana foliis dentatis* was cited. Morison's account and figure (Sect. 11, t. 19, fig. 23, miscited by Gronovius), were perfect, the latter showing the characteristic rhombic-oval leaves, and the description was adequate. Surely, when Muhlenberg based his *S. elliptica* upon such antecendent descriptions and figure he was not publishing a "nomen nudum". It may be inconvenient, but there seems to be perfectly sound reason for taking up

SCUTELLARIA ELLIPTICA Muhl. in Trans. Am. Phil. Soc. iii. 173 (1793); ex Biehler, Plant. Nov. Herb. Spreng. Cent. 26 (1807); ex Spreng. Mant. Prim. Fl. Hal. 44 (1807). *S. integrifolia* L. Sp. Pl. 599 (1753), excl. Gronovian citation. *S. pilosa* Michx. Fl. Bor.-Am. ii. 11 (1803), not Hill (1768). *S. ovalifolia* Pers. Syn. ii. 136 (1806). *S. nemorosa* Raf. in Am. Mo. Mag. ser. 2. ii. 120 (1817). *S. teucrifolia* J. E. Sm. in Rees Cycl. xxxii. no. 15 (1819). *S. pilosa*, var. *ovalifolia* (Pers.) Benth. in DC. Prodr. xii. 423 (1848), nomenclaturally based on *S. ovalifolia* Pers. (which, according to Epling, l. c. 86, was "based apparently upon Plukenet's figure" of a plant from Virginia, so that it is difficult to follow him in his statement that *S. pilosa*, var. *ovalifolia* (Pers.) Benth. had its "type collected in New Jersey near Princeton (N. Y. Bot. Gard.)". It is probable that the Princeton specimen which Bentham cited, not as a "type", is in the Bentham or the DeCandolle Herbarium). *S. ovalifolia*, subsp. *mollis* Epling, l. c. 86 (1942).

The taking up of SCUTELLARIA ELLIPTICA forces the following change:

SCUTELLARIA ELLIPTICA Muhl., var. **hirsuta** (Short), comb. nov. *S. hirsuta* Short in Transylv. Jour. Med. viii. 582 (1836). *S. pilosa* Michx., var. *hirsuta* (Short) Gray, Syn. Fl. N. Am. ii[1].

379 (1878). *S. ovalifolia* Pers., subsp. *hirsuta* (Short) Epling, l. c. 86 (1942). *S. ovalifolia* Pers., var. *hirsuta* (Short) Fernald in RHODORA, xliv. 433 (1942).

It is in some ways fortunate that *Scutellaria elliptica* of Muhlenberg (1793) is so clearly applicable for we are thus saved from the complication started when Linnaeus became confused in publishing *S. integrifolia* L. Sp. Pl. 599 (1753). His account was as tangled as was his understanding of hosts of other American plants:

6. SCUTELLARIA foliis sessilibus ovatis: inferioribus obsolete serratis; superioribus integerrimis. *integrifolia.*
Scutellaria foliis integerrimis *Gron. virg.* 67.
Scutellaria caerulea virginiana, lamii aut potius teucrii folio, minor. *Pluk. alm.* 338. *t.* 313. *f.* 4.
Scutellaria, teucrii folio, marilandica. *Raj. Suppl.* 310.
Habitat in Virginia, Canada.

This was immediately followed by

7. SCUTELLARIA foliis lanceolatis. *Gron. virg.* 167. *hyssopifolia.*
Cassida mariana hyssopifolia. *Pet. act. angl.*
Habitat in Virginia.

The diagnosis "foliis . . ovatis: inferioribus obsolete serratis", the Plukenet description and drawing and the Ray account all belong to the plant above discussed as *S. elliptica*, while the Gronovian account and the Clayton specimen (photograph, × 1, before me) from which Linnaeus got the epithet *integrifolia* are of the plant currently so called; while the type of *S. hyssopifolia* (photograph, × 1, before me) is only a narrow-leaved individual of our familiar *S. integrifolia.* Neither element of the bipartite Linnean species is known from Canada!

Now, a complication might seem to arise from the treatment by J. E. Smith in Rees Cyclopaedia, xxxii. nos. 15 and 16 (1819). There Smith, possessor of the Linnean Herbarium, pointed out the original confusion, described as new *S. teucrifolia*, the ovate- and obsoletely serrate-leaved element of the Linnean bipartite *S. integrifolia* (excluding the entire- and narrow-leaved plant of Gronovius), and concluded, regarding the name *integrifolia*, "This appellation, however, being erroneous, and having caused much confusion among subsequent botanists, is best laid aside, and we have preferred one taken from the very apt synonyms of Plukenet and Ray." And, forthwith, Smith reduced to *S. hyssopifolia* L. (1753) the Gronovian element, "S. foliis integer-